

CLAIMS

We claim:

1. A mount comprising:
 - (a) a unitary resilient member, said unitary resilient member comprising a spring portion, a damping layer and an intermediate stiffening portion joining the spring portion and damping layer, said resilient member being compressible and extendible;
 - (b) a casing substantially enclosing said unitary resilient member; and
 - (c) damping means located in contact with said damping layer, the damping means providing damping in response to compression and extension of said resilient member.
2. The mount as claimed in claim 1 wherein the unitary resilient member is selected from the group of materials consisting of natural rubber, polybutadiene, polyisoprene, hydrogenated nitrile and styrene butadiene.
3. The mount as claimed in claim 1 wherein the unitary resilient member is comprised of a combination of materials selected from the group of materials consisting of polybutadiene, polyisoprene, hydrogenated nitrile and styrene butadiene.
4. The mount as claimed in claim 2 wherein the natural rubber is reinforced with a carbon black.

10020356-10001
10020356-10001

5. The mount as claimed in claim 4 wherein the unitary resilient member is cured with sulfur and/or peroxide.
6. The mount as claimed in claim 2 wherein the natural rubber includes an internal lubricant.
7. The mount as claimed in claim 6 wherein the internal lubricant is comprised of either octadecanoic acid or 9-octadecenamide.
8. The mount as claimed in claim 1 wherein the damping is surface effect damping.
9. The mount as claimed in claim 1 wherein the mount has a greater lateral stiffness in a first lateral direction than in a second lateral direction.
10. The mount as claimed in claim 1 wherein the intermediate stiffening section includes cavities that are opposed.
11. The mount as claimed in claim 1 wherein the damping means comprises a collar with at least one damping element supported by the collar.
12. The mount as claimed in claim 11 wherein the collar is comprised of first and second collar halves.

THE UNIVERSITY OF CHICAGO

13. The mount as claimed in claim 1 wherein the mount is compressible and extendible along an axis, the mount including a bolt oriented along said axis.
14. The mount as claimed in claim 1 further comprising an inner member having a first end proximate the spring portion and a second end, said mount further comprising a snubbing plate seated on the first end of the inner member, wherein said snubbing plate limits the spring compression.
15. The mount as claimed in claim 1, wherein the unitary resilient member comprises a web joining the intermediate stiffening section and the damping layer, said web adapted to limit the displacement of the damping means as the unitary resilient member is extended.
16. The mount as claimed in claim 2 wherein the material comprising the unitary member displays low creep rates under static and dynamic loading.
17. The mount as claimed in claim 2 wherein the material comprising the unitary member exhibits the friction, wear and hysteresis properties required to supply surface effect damping.